

In the Claims:

Please substitute the following full listing of claims for the claims as originally filed or most recently amended.

1. (Original) A semiconductor integrated circuit, comprising:
 - a) a semiconductor-on-insulator (SOI) region with a buried dielectric layer;
 - b) a bulk semiconductor region adjacent to the SOI region;
 - c) a trench filled with epitaxial semiconductor material disposed between the SOI region and bulk region.
2. (Original) The semiconductor integrated circuit of claim 1 further comprising a buried sidewall spacer between the SOI region and bulk region, and disposed under the trench filled with epitaxial semiconductor material.
3. (Original) The semiconductor integrated circuit of claim 1 further comprising:
 - a) a first type doping in the bulk region;
 - b) a second type doping in the SOI region;
 - c) a butted P-N junction between the first-type doping and second type doping, wherein the butted junction is disposed in the SOI region, or in the filled trench.
4. (Original) The semiconductor integrated circuit of claim 3 wherein the first type doping extends into the SOI region.

5. (Original) The semiconductor integrated circuit of claim 3 wherein the trench filled with epitaxial semiconductor material has the first type doping.

6. (Original) The semiconductor integrated circuit of claim 3 further comprising a metal silicide layer disposed on the butted P-N junction.

7. (Original) The semiconductor integrated circuit of claim 6 wherein the metal silicide layer is disposed on a portion of the bulk region having the first type doping and on a portion of the SOI region having the second type doping.

8. (Original) The semiconductor integrated circuit of claim 1 wherein the SOI region and bulk region have different crystal orientations.

9. (Original) The semiconductor integrated circuit of claim 8 wherein the SOI region and bulk region are made of silicon, and wherein the SOI region has a {110} crystal orientation, and the bulk region has a {100} crystal orientation.

10. (Original) A semiconductor integrated circuit, comprising:

- a) a semiconductor-on-insulator (SOI) region with a buried dielectric layer;
- b) a bulk semiconductor region adjacent to the SOI region;
- c) a P-N junction formed from a first type doping in the bulk region and a second type doping in the SOI region;
- d) a metal silicide layer disposed on and electrically bridging the P-N junction.

11. (Original) The semiconductor integrated circuit of claim 10 wherein the P-N junction is disposed in the SOI region.

12. (Original) The semiconductor integrated circuit of claim 10 wherein the P-N junction is disposed at the trench filled with epitaxial semiconductor material.

13. (Original) The semiconductor integrated circuit of claim 10 further comprising a trench filled with epitaxial semiconductor material disposed between the SOI region and bulk region;

14. (Withdrawn) A method for forming a semiconductor integrated circuit with an SOI region and a bulk region, comprising the steps of:

- a) forming a substrate with an SOI region and a bulk region separated by an embedded sidewall spacer;
- b) etching the sidewall spacer to form an empty trench; and
- c) epitaxially depositing semiconductor material in the trench.

15. (Withdrawn) The method of claim 14 further comprising the steps of:

- d) planarizing the wafer after step (c).
- e) forming a first type doping in the bulk region, and a second type doping in the SOI region, wherein a P-N junction between the first type doping and the second type doping is disposed in the SOI region or in the trench.

16. (Withdrawn) The method of claim 15 further comprising the step of:

f) forming a metal silicide layer across the P-N junction after step (f).

17. (Withdrawn) The method of claim 13 wherein the sidewall spacer is completely removed in step (b).

18. (Withdrawn) The method of claim 13 wherein the sidewall spacer is partially removed in step (b).

19. (New) The semiconductor integrated circuit of claim 1, wherein said epitaxial semiconductor material has a crystal orientation corresponding to crystal orientation of said SOI region adjacent said SOI region and a crystal orientation corresponding to said bulk semiconductor region adjacent said bulk semiconductor region and includes a transition of crystal orientation at approximately a center of said epitaxial semiconductor material if said crystal orientation of said SOI region and said crystal orientation of said bulk semiconductor region are different.

20. (New) The semiconductor integrated circuit of claim 10, wherein said epitaxial semiconductor material has a crystal orientation corresponding to crystal orientation of said SOI region adjacent said SOI region and a crystal orientation corresponding to said bulk semiconductor region adjacent said bulk semiconductor region and includes a transition of crystal orientation at approximately a center of said epitaxial semiconductor material if said crystal orientation of said SOI region and said crystal orientation of said bulk semiconductor region are different.